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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,171	10/23/2003	Edgar A. O'Rear III	820233.02310	8356
72766 7590 08/17/2009 Hall, Estill, Hardwick, Gable, Golden & Nelson, P.C. 100 North Broadway Chase Tower, Suite 2900 Oklahoma City, OK 73102				
EXAMINER				
AHMED, SHEEBA				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
08/17/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/692,171

**Applicant(s)**

O'REAR ET AL.

**Examiner**

SHEEBA AHMED

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-34 is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. No amendments have been made to the claims in the response submitted on May 11, 2009. **Claims 9-34 are pending.**

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9-17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartwell et al. (US 5,106,691).

Harwell et al. disclose a method of coating a substrate surface (***corresponding to the first and/or second surface of the sheet of material of the claimed invention***) wherein the substrate surface is contacted with a surfactant solution comprising a liquid in which at least a first surfactant is dissolved so that an interface is formed between the substrate surface and the surfactant solution under conditions which promote the assembly at the interface of surfactant molecules, such assembled molecules defining a surfactant template for the film to be produced. Finally, the monomer molecules are polymerized to form a polymeric film dimensionally determined by the surfactant interface (***such a method corresponds to the admicellar polymerization of the claimed invention***). Such a method may be used to coat the

surface of objects having non-planer surfaces or to coat porous objects with an ultra-thin coating (Column 1, lines 18-37 and 55-60). The surfactant is sodium dodecyl sulfate (Column 4, lines 36-40 and the Examples). A suitable monomer is styrene and a suitable initiator is azobisisobutyronitrile or persulfate wherein the reaction is conducted in a heated water bath having a temperature of 60-70°C for 15-20 minutes (Column 5, lines 60-66 and Column 7, lines 23-24). The polymeric film formed is hydrophobic (See claim 1). All limitations of claims 9-17, 19, and 20 are disclosed in the above reference.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Hartwell et al. (US 5,106,691).

Harwell et al., as discussed above, disclose an admicellar method of polymerizing a polymeric film on a porous substrate but do not teach that the reaction may be carried out at 60-100°C for 30 to 180 minutes.

However, it would have been obvious to one of ordinary skill in the art to optimize the reaction temperature and the reaction time given that Hartwell et al. teach that the reaction may be carried out until the onset of emulsion formation and bulk

polymerization as evidenced by the appearance of cloudiness in the reaction supernatant (Column 8, lines 18-27).

### ***Response to Arguments***

4. Applicant's arguments with regards to claims 9-20 have been fully considered but they are not persuasive. Applicants traverse the rejections based on Hartwell and submit that Applicant's claims are directed to a method of making a substrate having an admicellar hydrophobic polymer coating thereon, comprising the steps of: providing a substrate comprised of a plurality of individual fibers, each of the individual fibers having at least one surface; and initiating an admicellar polymerization reaction on the at least one surface of the plurality of individual fibers to provide the at least one surface of the plurality of individual fibers with an admicellar hydrophobic polymer coating on at least one surface of the plurality of individual fibers and that Hartwell does not teach coating the surface of individual fibers. However, the Examiner disagrees. The substrates taught by Hartwell inherently comprise individual fibers and inherently result in the coating of individual fibers.

### ***Allowable Subject Matter***

5. Claims 21- 34 are allowed.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEEBA AHMED whose telephone number is (571)272-1504. The examiner can normally be reached on Monday-Friday from 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sheeba Ahmed/  
Primary Examiner, Art Unit 1794